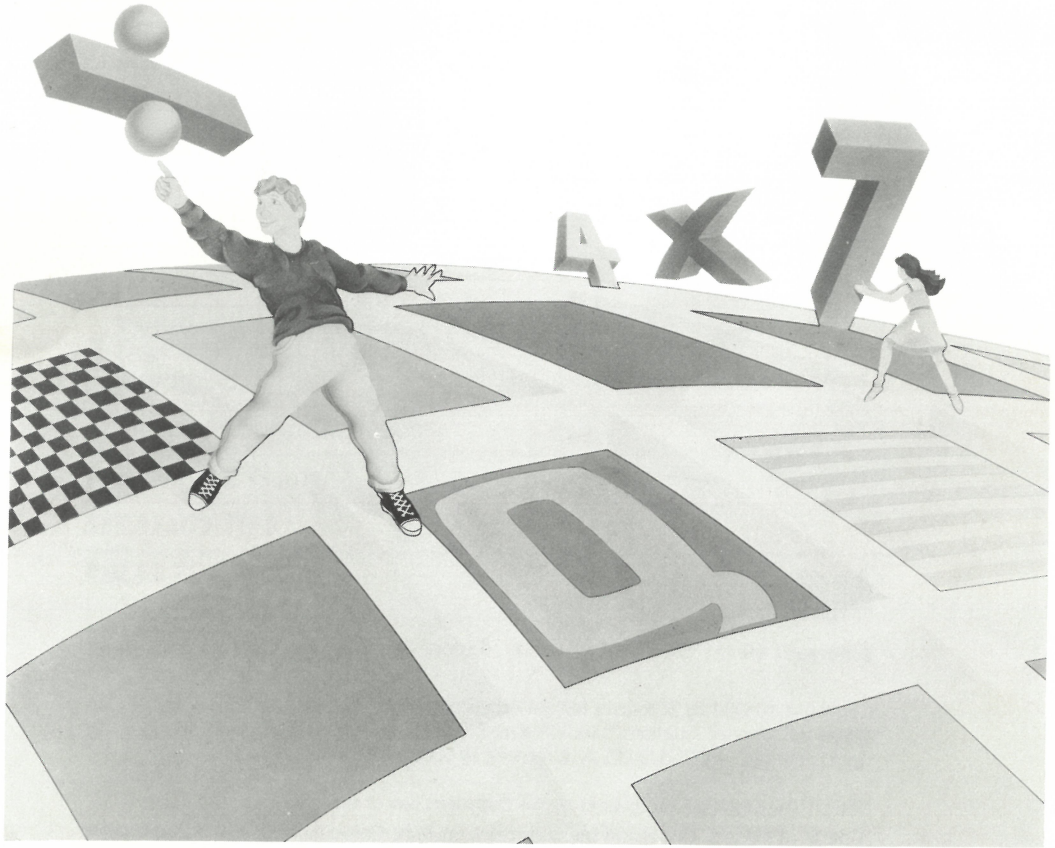
QUATIONS™



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INTRODUCTION

Quations™ is the fast-paced CROSSMATH™ game for players ages seven to adult. Playing the game increases your knowledge of basic math skills and also improves your planning and problem-solving abilities. With several different game options, *Quations* can offer just the right challenge to players of all skill levels—from beginning math students to expert mathematicians.

The object of the game is to build equations on the *Quations* game board, using as many number and operation symbols (+, −, ×, ÷, =) as possible. Up to three people play against Quato, the computerized math bird. At the start of each game, the computer deals number tiles and operation tiles to each player. The first player begins by covering the center square with either a horizontal or vertical equation. Play proceeds with each player constructing a vertical or horizontal equation that uses a number or operation tile already on the board. Players creating equations that cover bonus squares receive additional bonus points. On the advanced level, players must add up their scores correctly after each turn.

Players continue taking turns until one player uses up all of his or her number tiles, and until there are no more number tiles left for the computer to distribute.

GETTING STARTED

Loading the Program

To load the *Quations*™ game disk into your computer, follow the directions on the reference card included with the *Quations* package. Once the program loads, you'll see the title screen. If you've played before, you'll also see the three highest scores recorded on your disk. As you play the *Quations*™ game, the scoreboard will be updated every time a record is broken.

The next screen you'll see is a menu. The menu asks you to choose between playing the *Quations* game or seeing a sample game. To choose, press the **SPACE BAR** until the selection you want is surrounded by a box. Then press **RETURN.**

If you choose to see the demonstration, you'll see a move-by-move account of how the *Quations* game is played. You can get back to the menu at any time by pressing the key described on the *Quations* game reference card.

Loading an Old Game

Once you choose "PLAY QUATIONS" from the menu, the computer will ask whether you want to continue with an old game or begin a new game. If you choose to continue an old game, the computer will ask you to remove the *Quations* game disk from the disk drive and insert the data disk on which you saved the old game. Once you do, you'll see the date a game was played and the names of the players. When the question "THIS GAME?" appears, press **RETURN** to indicate YES, if this is the game you want to play. If you want to play a different game, press the **SPACE BAR** to indicate NO, and press **RETURN.** If you select NO, another game will appear on the screen. When you've chosen the game you want, the computer will tell you to remove the data disk and insert the *Quations* game disk.

Setting Up a New Game

Before you begin a new game, you'll see a series of menu screens. By making selections from these screens, you can set up the *Quations* game just the way you want it.

Names

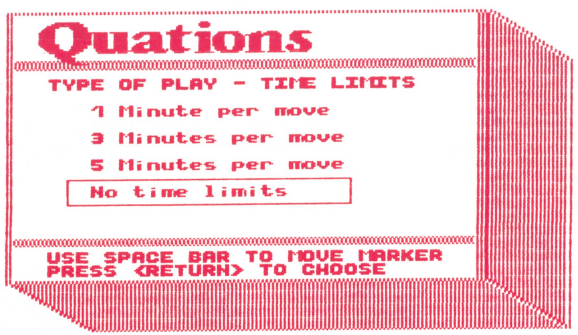
First the computer will ask how many players there will be. The *Quations*™ game provides you with a smart opponent—Quato, the math bird. Up to three people can play against Quato.

Next, the program will ask for the name of each player. Enter your name (up to six characters). If you enter a name that is too long, the program may prompt you to enter a nickname or initials.

Sound and Time-Limit Options

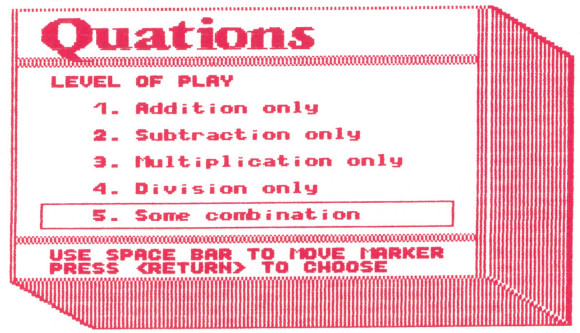
The next question will give you the option of turning the sound on or off. If you choose to keep the sound on, your moves will be accompanied by short tones and beeps. If you'd like a silent game, choose the "NO SOUNDS" option.

The next menu will allow you to choose whether you want a time limit on your game. Working against the clock can make the *Quations* game even more exciting. You can choose to have time limits of one minute, three minutes, or five minutes for each move. You can also choose to have no time limit at all. It's a good idea to play without a time limit in your first few games. Then you can choose faster games as your computing power and problem-solving strategies improve.



Level of Play

The *Quations* game is very flexible. Its multiple-level feature allows you to play the game using addition, subtraction, multiplication, division, or any combination of these operations. You tell the program which operations you'd like to work with by means of one or two menus. Each menu works the same as other menus in the program. Press the **SPACE BAR** until the box surrounds your choice, then press **RETURN.**



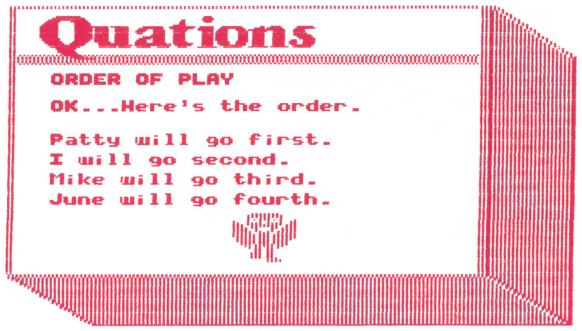
If you choose to use some combination of operations, you'll see a second menu. Select the combination of operations you'd like. To undo a choice, simply hit **RETURN** a second time. When you've finished choosing your operations, select "I'm finished choosing."

You'll also need to choose between the beginner's level and the advanced level. If you choose the beginner's level, the computer will add up your score for you after each turn. If you choose the advanced level, you'll have to figure your own score. To receive your points on the advanced level, your addition must be correct.

PLAYING THE GAME

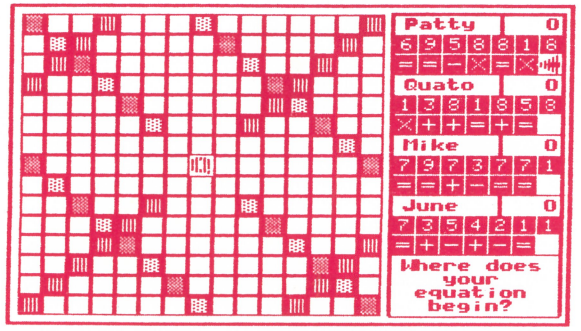
Order of Play

When you finish setting up your game, Quato will shake his invisible dice to choose who goes first, second, third, and fourth. Once Quato tells you the order, the disk drive will whir for a moment and the game will begin.

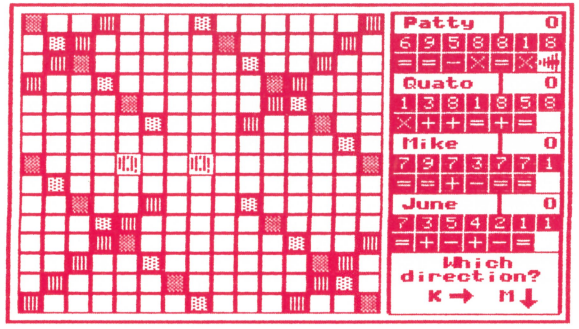


Playing Your Turn

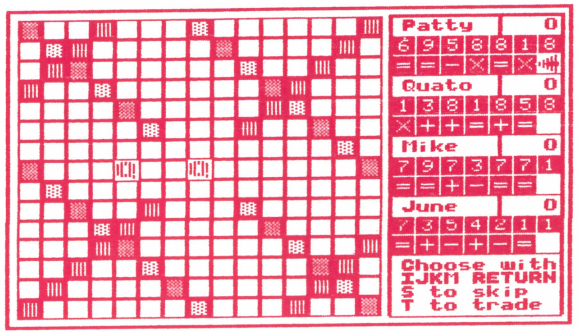
The computer will tell you when it's your turn to play. First, you'll need to specify where you'd like your equation to begin. You do this by using the direction keys described on the reference card that came with the *Quations*™ game package. When the cursor is on the starting position you want, press **RETURN.**



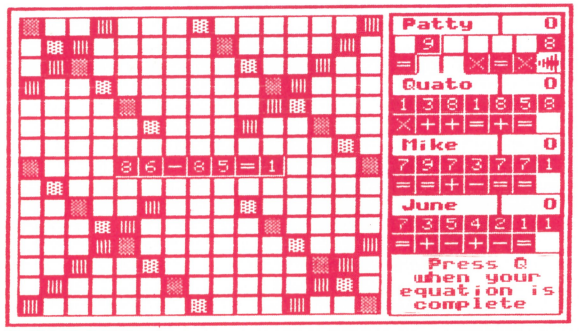
Next, you will need to press the direction keys to indicate whether your equation will go horizontally or vertically.



After you make these opening decisions, you'll be ready to choose the tiles for your equation, one tile at a time. You'll notice that the first tile is already highlighted. By using the direction keys, you can select any of the tiles. When the tile you want in your equation is highlighted, press **RETURN.**



Continue in this manner until your equation is complete. When you are finished entering your equation, press **Q.** The program will ask you if you're sure that you want to keep this particular equation. If you've made an error or have had second thoughts, select NO and you'll be able to start your equation again.



*At any point in the game, press the **H** key for help.*

If you've chosen the beginner's level of play, the computer will calculate the score for your equation. If you've chosen the advanced level of play, you'll have to calculate the value of the equation, including bonus squares, by yourself. To see what's underneath each of your tiles, press **RETURN** and each tile will be lifted for a moment. Any bonus squares covered will be displayed in the prompt box which appears at the bottom right-hand corner of the screen. (See Scoring, on page 12, for more information.)

Next, enter your score. If your equation is a valid one and your score calculation is correct, you'll get the points and you'll receive tiles to replace those used. If you do not add your points correctly, the play is taken back and it is the next player's turn.

Trading Tiles and Skipping a Turn

If you're having a hard time creating an equation with the tiles you were dealt, you may want to trade your turn for a new set of tiles. To trade your tiles, press **T**. The computer will deal you seven new number tiles and six new operation tiles. Remember, when you trade in your tiles, you lose your turn.

If you're stuck, you may also choose to skip your turn without trading in your tiles. To skip your turn and keep your tiles, press **S.**

Scoring

Here are the rules for scoring each equation:

1. The value of each number tile is the same as the number appearing on that tile. For example, the tile displaying the number 5 is worth 5 points, the tile displaying the number 6 is worth 6 points, and so on.

2. The value of each operation tile is as follows:

Addition	(+)	=	1 point
Subtraction	(−)	=	2 points
Multiplication	(×)	=	3 points
Division	(÷)	=	4 points
Equals	(=)	=	1 point

3. Bonus Squares:

a. A purple square doubles the point value of the tile.

b. A dark brown square triples the value of the tile.

c. A blue square doubles the value of the entire equation, including the double and triple digits.

If all tiles are used in an equation and two blue squares are covered, the score is doubled twice.

d. The first player to cover each bonus square is the only player to receive the bonus points.

If another player uses one of these squares to form an equation, he receives only the face value of the tile.

4. At the end of the game, the player who has used up all his or her number tiles receives the points of his/or her opponent's unplayed tiles.

5. If all players have number tiles remaining and no one can create an equation, the number tiles held by all the players are automatically subtracted from their scores.

Saving an Unfinished Game

If at any time you wish to leave the game, you can do so by pressing the key described on your *Quations*™ game reference card. If you do, the computer will ask whether you wish to save the game so you can finish it at a later time. If you answer YES, you'll be asked to enter the date. This will help you to distinguish this game from other unfinished games.

Next, you'll be asked to remove the *Quations* game disk and insert a disk for storing your game. First make sure the disk has been initialized. *See the documentation that came with your computer to learn how to initialize a disk.* When you're starting out, it's a good idea to create and label a *Quations* game data disk and keep it with the rest of your *Quations* game materials.

Ending the Game

The game is over when a player puts down an equation that uses up all of his or her number tiles, and when there are no number tiles left undealt. The computer will add the unused tiles of the other players to the winner's total and will calculate the winner's score.

If you cannot make an equation with your tiles and there are no more tiles left to trade for, you must press S and skip your turn. Occasionally, you may find that all players have tiles remaining but no one is able to create an equation. In this situation, each player should skip a turn. When all players have skipped a turn, the game is over, and the number tiles held by the players are subtracted from their scores. The player with the highest score is the winner.

Quato will perform a quick congratulatory dance for the winner. But, if Quato is the winner he'll dance even longer! Remember, Quato is a savvy player, but he can be beaten. By defeating Quato, you will establish yourself as a true master of the *Quations* game.

STRATEGY TIPS

The object of the game is to be the first to use up all your tiles, and to be the player who accumulates the highest number of points. Here are several strategies to keep in mind as you play.

1. Always look first for openings in which you can cover both a double equation square (blue) and one or more of the other bonus squares.

2. Try not to lay down an equation that will open up an opportunity for the other players to use Strategy #1.

3. Try to use the tiles with the highest numbers first.

4. Among your own tiles, look for numbers that are products of two other numbers (for example: 56, 72, 81, etc.). Try to use these numbers to create equations involving multiplication or division.

5. If you have two or three tiles with the same number, look for opportunities to create equations involving the addition or subtraction of two- or three-digit numbers. For example, if you have two 7s, see if you can make an equation such as $72 + 4 = 76$.

RULES SUMMARY

There are just a few simple rules to remember when playing the *Quations* game:

- The first equation must cover the Q square in the center.

- In solving equations, you must follow the order of mathematical operations. Perform all multiplication and division operations first. Then perform all addition and subtraction operations.

  Example: $6 + 2 \times 3 - 6 \div 3 = 6$ incorrect

  $= 10$ correct

- Players may use double-digit numbers, triple-digit numbers, and so on.

  Example: $46 + 98 = 145 - 1$

- Diagonal equations are not permitted.

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